

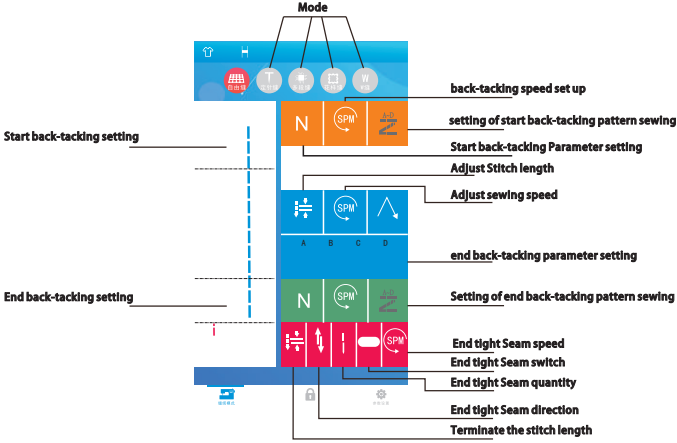
1. Operation key surface use

1-1. Main page

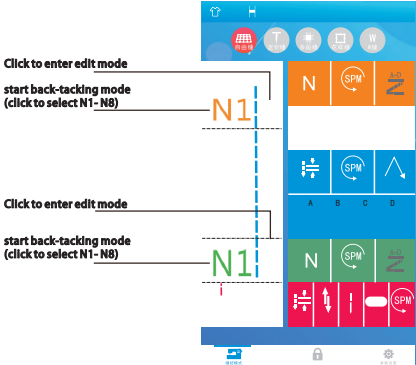


-1-

1.2 Free-stitch (normal back-stitch mode)

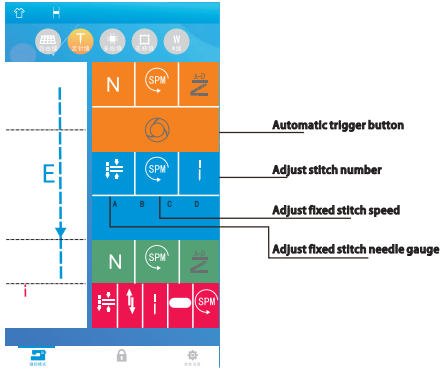


1-2-1. free sewing (back-tacking pattern sewing)

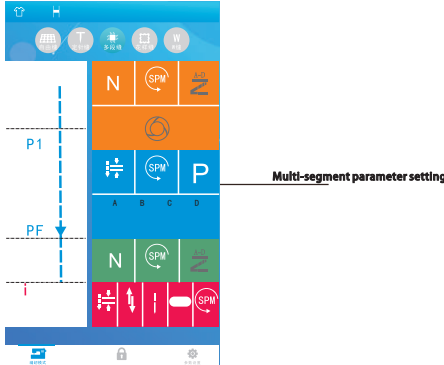


-2-

1-3fixed stitch

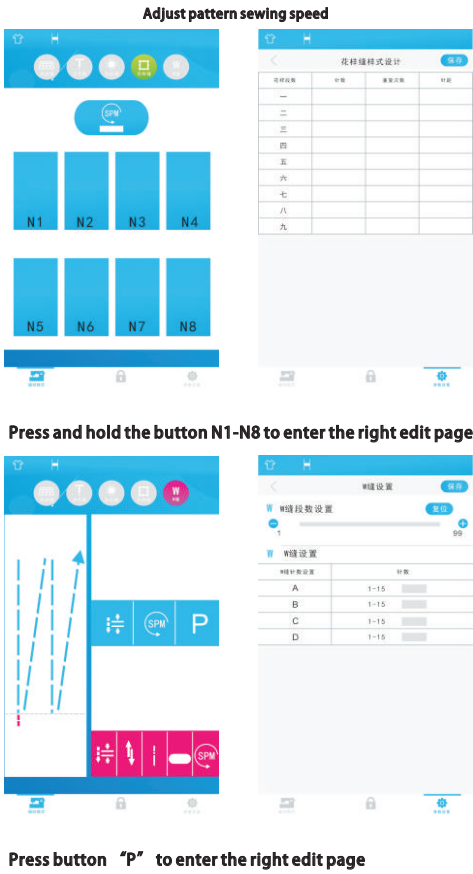


1-4. Multi-stage fixed stitch



-3-

1-5. pattern sewing



-4-

2.1 Operation key surface use

2. 1 Main interface description

name	button	Indicate
Mode		enter sewing mode page
Lock		set up/cancel lock
Parameter Setting		enter setting page
Counter display		Display current count, Press and hold the Icon for 4 seconds to enter
Free sewing		enter the free sewing style
fixed stitch		Click to enter a fixed stitch mode
Segmented self seam pattern mode Pattern sewing		Click to enter multi-stage fixed stitch mode
Pattern stitch		Click to enter pattern sewing mode
W sewing		click to enter W sewing mode
Setup		Start and end back-tacking setting
Sewing speed		adjust current sewing speed
Needle gauge		display current needle gauge,click to enter set up
back-tacking pattern sewing		click to enter the back-tacking pattern sewing mode
End tight Seam direction		adjust end tight seam direction
Stitch number		display current stitch number ,click to enter setup

-5-

2. 1 main page instructions

name	button	Indicate
Switch		On-off key
Automatic trigger button		(Only valid in one-stage fixed-stitch sewing and multi-stage fixed-stitch sewing) Set to use or cancel the automatic trigger function
Start back-tacking button		Execute the first back seam B or execute the first back seam (Section A.B) once, execute the first back seam (Section A.B) twice
End back-tacking button		Execute the first back seam C or execute the first back seam (Section C.D) once, and execute the first back seam (Section C.D) twice

2. Set the interface

2. 1 start back-tacking set up: N (organ colour icon)

No.	SHOW	RANGE	Initial value	Description and remarks
1001	Start back-tacking mode selection	0/1	1	0: Manual, Pedal- control can stop and start. 1: Automatic, One shot to pedal, it can automatic execute back-tacking action.
1002	Mode selection at the end of start back-tacking	CON/STP		CON: At the end of Start Back-Tacking, machine continues sewing if pedal pressed or START signal on (standing operation) STP: At the end of Start Back-Tacking, machine stops
1003	stitch numbers of Start back-tacking A	0/15	3	
1004	stitch numbers of Start back-tacking B	0/15	3	
	Start back-tacking speed	100-3000	2000	

2. 2 end back-tacking set up: N (blue icon)

No.	SHOW	RANGE	Initial value	Description and remarks
2001	Mode selection for end back-tacking	0/1	1	Mode selection for end back-tacking 0: Automatic, One shot to pedal, it can automatic execute back-tacking action 1:Manual, Pedal- control can stop and start.
2003	stitch numbers of end back-tacking A	0/15	3	
2004	stitch numbers of end back-tacking B	0/15	3	
	End back-tacking speed	100-3000	2000	

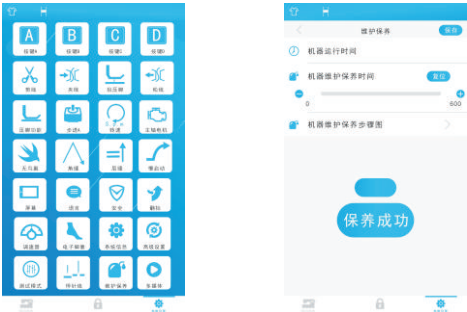
-6-

2. Setting



2. maintenance instruction

- When the accumulated value of the machine running time reaches the set value, the display box will pop up the maintenance operation step chart, please follow the instructions in the step chart
- Enter into“(5)” Instruction page, the default password is 2017, click the“(2)” below to clear the accumulated time, and the accumulated time“(3)” will restart timing. Enter into page“(5)”, password:2017, print“(2)” counter reset, the function



-7-

2. 3: Button A

No.	SHOW	RANGE	Initial value	Description and remarks
3001	Function selection	0-6	5	0:Function off 1.Continuous compensation stitch(1/2 length) 2.Compensation stitch (1 needle length) 3.Continuous continuous compensation stitch(1/2 length) 4.Continuous compensation stitch (1 needle length) 5.Reverse sewing 6.Sealing function
3002	Needle length setting	0-6. 0mm	4	
3003	compensation stitch direction setting	Positive Reverse	Positive	Positive Reverse
3004	Manual stitch length setting	0-6. 0mm	2	

2. 4: Button B

No.	SHOW	RANGE	Initial value	Description and remarks
3001	Function selection	0-6	5	0:Function off 1.Continuous compensation stitch(1/2 length) 2.Compensation stitch (1 needle length) 3.Continuous continuous compensation stitch(1/2 length) 4.Continuous compensation stitch (1 needle length) 5.Reverse sewing 6.Sealing function
3002	Needle length setting	0-6. 0mm	4	
3003	compensation stitch direction setting	Positive Reverse	Positive	Positive Reverse
3004	Manual stitch length setting	0-6. 0mm	2	

2. 5: Button C

No.	SHOW	RANGE	Initial value	Description and remarks
3001	Function selection	0-6	2	0:Function off 1.Continuous compensation stitch(1/2 length) 2.Compensation stitch (1 needle length) 3.Continuous continuous compensation stitch(1/2 length) 4.Continuous compensation stitch (1 needle length) 5.Reverse sewing 6.Sealing function
3002	Needle length setting	0-6. 0mm	4	
3003	compensation stitch direction setting	Positive Reverse	Positive	Positive Reverse
3004	Manual stitch length setting	0-6. 0mm	2	

-8-

2. 6: Button D

No.	SHOW	RANGE	Initial value	Description and remarks
3001	Function selection	0-6	2	0:Function off 1.Continuous compensation stitch(1/2 length) 2.Compensation stitch (1 needle length) 3.Continuous continuous compensation stitch(1/2 length) 4.Continuous compensation stitch (1 needle length) 5.Reverse sewing 6.Sealing function
3002	Needle length setting	0-6. 0mm	4	
3003	compensation stitch direction setting	Positive Reverse	Positive	Positive Reverse
3004	Manual stitch length setting	0-6. 0mm	2	

2. 7: Trimmer

No.	SHOW	RANGE	Initial value	Description and remarks
7001	Tangent output function setting	OFF/ON	ON	switch of trimmer
7002	back speed of trimmer step motor	20-400	150	
7003	speed of the first paragraph trimmer	20-400	200	
7004	speed of the second paragraph trimmer	20-400	200	
7005	Time of trimmer action	10-990	200	
7006	angel of the first paragraph trimmer	0-1439	1035	
7007	angel of the second paragraph trimmer	0-1439	1435	
7008	distance of the first time trimmer	0-200	55	
7009	distance of the second time trimmer	0-200	105	
7010	time speed of trimmer step motor	10-990	100	

2. 8: Presser foot function

No.	SHOW	RANGE	Initial value	Description and remarks
8001	thread clamping pressure	0-16	8	0: Close 1: Dial line 2-16: Pressure of Clamp
8002	thread clamping starting angle	10-359	100	
8003	thread clamping ending angle	10-359	270	
8004	thread dialing/sweeping action time	10-990	220	
8005	thread dialing/sweeping forward delay time (ms)	5-990	200	

-9-

2. 9: Presser foot function

No.	SHOW	RANGE	Initial value	Description and remarks
9001	Max. presser lifting height	0-200	150	
9002	midway presser lifting height	0-80	50	Based on 80, down to negative, to reduce height

2. 10: relax thread

No.	SHOW	RANGE	Initial value	Description and remarks
10001	Thread tension release start angle	1-359	30	
10002	Thread tension release end angle	1-359	180	
10003	Loose thread strength setting	0-80	24	The greater the value, the greater the action strength

2. 11: presser foot function

No.	SHOW	RANGE	Initial value	Description and remarks
11001	presser foot down time	10-990	150	
11002	presser foot loose thread function	0/1	1	0. close 1. open
11003	presser foot mode selection	0/1	0	0. Close, sewing stop, only pedal control presser foot lifting 1. sewing stop, automatic presser foot lifting up
11004	presser foot mode selection	0/1	0	0. Close, after trimming, only pedal control presser foot lifting 1. after trimming, automatic presser foot lifting up

2. 12: Step motor A

No.	SHOW	RANGE	Initial value	Description and remarks
12001	reverse sewing motor zero point correcting	0-100	50	
12002	sewing stitch length compensation	0-100	50	
12003	reverse sewing stitch length compensation	0-100	50	
12004		0-200		

2. 13: RPM

No.	SHOW	RANGE	Initial value	Description and remarks
13001	speed of presser foot	20-400	150	R.P.M of foot lifter up and down
13002	lower speed (Maximum Position Speed)	100-500	200	Position Speed setting
13003	during trimmer the speed of main motor	100-500	300	
13004	Maximum speed limit of handle Reserve sewing	30-3200	0	

-10-

2. 14: Main shaft motor

No.	SHOW	RANGE	Initial value	Description and remarks
14001	Main shaft motor zero position regulate	10-990	165	After trimmer Reverse lift pin function choice
14002	After trimmer Reverse lift pin function choice	OFF/ON	OFF	Control by ON/OFF button, Dark (OFF), bright (ON)
14003	after trimmer Reverse lift pin angel adjust	40-200	160	
14004	Turn on power automatic find UP needle position	0/1	0	0. no need to find UP needle position 1. auto-find UP needle position
14005	stop sewing Strength	1-45	16	
14006	after trimmer stop sewing Strength	10-50	20	
14007	Needle position choice	U/D	D	U. UP D. DOWN

2. 15: Bird nest Prevention

No.	SHOW	RANGE	Initial value	Description and remarks
15001	Bird nest Prevention device switch	OFF/ON	OFF	Control by ON/OFF button, Dark (OFF), bright (ON)
15002	The delay time before hook thread with clamp function without any thrum (ms)	0-990	60	
15003	The hook thread action time with clamp function without any thrum (%)	0-990	70	
15004	The return back delay time of hook thread with clamp function without any thrum (%)	0-990	200	
15005	Hook thread action time	10-990	30	
15006	Duty cycle for Hook thread with clamp function without any thrum (ms)	0-100	65	
15007	The suction time for clamp function without any thrum (ms)	0-5000	500	
15008	Duty cycle for wiper thread without any thrum	20-100	65	
15009	Clamping force setting	0-80	5	
15010	Thread wiping/Thread sweeping time	10-990	220	
15011	The delay time before thread wiping/ sweep (ms)	5-990	200	

2. 16: Multi- ply sewingntion

No.	SHOW	RANGE	Initial value	Description and remarks
16001	Switch of Multi- ply sewing	OFF/ON	OFF	Control by ON/OFF button, Dark (OFF), bright (ON)
16002	RPM of Multi- ply sewing	200-3700	2000	
16003	sensor AD value of feeling fabric thickness	0-1023	530	display Current AD value of fabric thickness sensor
16004	Multi- ply sewing percent	1-100	10	
16005	Stitch length limit	0-6. 0	6. 0	
16006	AD value of foot lifter height			system directly display

-11-

2. 17: Slow play seam shortcuts

No.	SHOW	RANGE	Initial value	Description and remarks
17001	Slow play seam shortcuts	OFF/ON	OFF	Control by ON/OFF button, Dark (OFF), bright (ON)
17002	speed of slow play seam shortcuts	200-1500	400	
17003	needles of slow play seam shortcuts	0-80	2	

2. 18: Screen

No.	SHOW	RANGE	Initial value	Description and remarks
18001	Operation brightness	10-100	80	
18002	Brightness of looking screen	10-30	20	during working, the brightness of display
18003	Automatic Lock-In Settings for Main Interface	0-999	60	Lock screen time
18004	Automatic lock switch	OFF/ON	ON	Control by ON/OFF button, Dark (OFF), bright (ON)

2. 19: Language

No.	SHOW	RANGE	Initial value	Description and remarks
19001	Language Settings	0/1	0	0: 中文 1: English

2. 20: Safety

No.	SHOW	RANGE	Initial value	Description and remarks
20001	thread trimming Protection switch	0/1	0	0: Non-detection 1: detection
20002	Knee rest switch	0/1	1	0: Non-detection 1: detection
20003	Input High Voltage Protection Value Settings	880	880	When the external Input AC voltage is converted to DC voltage and the value exceeds the set value, the system critiques E01 and stop working
20004	Protection Time of Loose Line Electromagnet	1-120	2	After exceeding the current set time value, the electromagnet is in a non-working state

2. 21: Turn up

No.	SHOW	RANGE	Initial value	Description and remarks
21001		0-2	2	0: Not detecting 1: Positive signal 2: Counter signal

-12-

2. 22: Pedal

No.	SHOW	RANGE	Initial value	Description and remarks
22001	Speed Curve Adjustment(%)	10-100	80	
22002	Pedal to half-heeling position, presser foot UP	0-2	1	0: Close 1: Pedal to half-heeling position or heeling position, presser foot keep UP 2: Only pedal to heeling position, presser foot keep UP
22003	Forward step pedal position	30-1000	520	
22004	Intermediate step pedal position	30-1000	420	
22005	Presser foot of pedal position	30-1000	270	trigger the position of auto-press foot
22006	Trimming of pedal position	30-1000	130	trigger the position of auto-trimmer
22007	Delay time of half heeling pedal	10-900	200	
22008	Controller AD value			directly display

2. 23: Electronic Knee

No.	SHOW	RANGE	Initial value	Description and remarks
23001	Controller AD value	0-1023	600	Electronic Knee start AD value
23002	Switch of light foot lifter up	OFF/ON	OFF	running main shaft, meantime Electronic Knee still can working
23003	Electronic Knee with or without loose thread	0/1	1	0: close 1: open
23004	loose thread function start value	0-150	100	Based on the height of presser foot, using Electronic Knee or auto-foot lifter, while the data over the Initial value, tension will open

2. 24: System

No.	SHOW	RANGE	Initial value	Description and remarks
24001	R.P.M of motor			display current R.P.M.
24002	Angel of needle position			display current motor angel
24003	Electronic Knee position AD value			Electronic Knee Zero position value
24004	Trimmer position AD value			directly display
24005	Control box version number			display control box version
24006	Control box minor version number			
24007	Display board version number			display screen panel version
24008	Resource version number			
24009	Buebar Voltage AD value			
24010	Grating signal			

-13-

24011	Model selection	OFF/ON	ON	Convertible different models
24012	Reset			0: Don't restore: 1: restore

2. 25: Advanced Settings (Password enter into program, otherwise you can't enter)

No.	SHOW
25001	Advanced Settings of Main shaft motor
25002	Advanced Settings of reverse sewing step motor
25003	Advanced Settings of presser foot step motor
25004	Advanced Settings of change password
25005	Main Motor Maximum speed limit
25006	Maximum stitch length limit

2. 25. 1: Advanced Settings of Main shaft motor

No.	SHOW	RANGE	Initial value	Description and remarks
250011	Main shaft motor rotation direction	0/1	1	0: Clockwise 1: Counterclockwise Lock stitch running direction
250012	Main shaft motor maximum current	0-20	10	
250013	locked rotor current locked rotor current	0-20	10	
250014	locked rotor current current on other occasions	0-20	16	
250015	Main shaft motor encoder type selection	0/1	0	0: without Magnetic ring 1: with Magnetic ring
250016	distance of UP and DOWN	1-1400	720	

2. 25. 2: Advanced Settings of reverse sewing step motor

No.	SHOW	RANGE	Initial value	Description and remarks
250021	reverse sewing step motor holding current	1-12	6	
250022	reverse sewing step motor Maximum current	1-12	12	
250023	reverse sewing step motor Maximum R.P.M.	20-600	500	

-14-

2. 25. 3: Advanced Settings of presser foot step motor

No.	SHOW	RANGE	Initial value	Description and remarks
250031	presser foot motor holding current	1-12	4	
250032	presser foot motor Maximum current	1-12	8	
250033	Maximum pressure foot limit	0-200	150	

2. 25. 4: Advanced Settings of change password

No.	SHOW	RANGE	Initial value	Description and remarks
250041	Change password		2017	After modification, press OK to save the new password

2. 25. 5: Main Motor Maximum speed limit

No.	SHOW	RANGE	Initial value	Description and remarks
250051	Maximum speed limit	100-5000	4200	

2. 25. 6: Maximum stitch length limit

No.	SHOW	RANGE	Initial value	Description and remarks
250061	Maximum stitch length limit	0-7. 0	6. 0	

2. 26: Test mode

No.	SHOW	RANGE	Initial value	Description and remarks	
26001	Test mode switch	OFF/ON	OFF	Control by ON/OFF button, Dark (OFF), bright (ON) Effective immediately after opening	
26002	Output Function Individual Test	thread trimming Presser foot		When the needle keep up, click the trimmer button to check knife position (disassemble needle plate—then click presser foot button, the presser foot will auto up)	
26003	Test mode setting				
cycle	Test speed (0—not to execute)	Running time	Stop time	Motor running direction	Cycle Time (s) (no limit when the time is 0)
1	3500	20	20	CCW	0
2	0	0	0	CCW	0
3	0	0	0	CCW	0
4	0	0	0	CCW	0
5	0	0	0	CCW	0

-15-

2. 27: Needle position

No.	SHOW	RANGE	Initial value	Description and remarks
27001	Up needle position value	0-1439	25	
27002	Down needle position value	0-1439	750	
27003	Up needle position shortcut adjustment		25	
27004	Down needle position shortcut adjustment		750	

2. 28: Maintenance

No.	SHOW	RANGE	Initial value	Description and remarks
28001	Running time			Start timing after power on
28002	Maintenance time	0-600	500	Refueling time
28003	Maintenance steps chart			Click the right arrow to enter into parameter, you can browse the maintenance steps

2. 29: Multimedia

No.	SHOW	RANGE	Initial value	Description and remarks
29001	Video			
28002	Music			
28003	U disk			

2. 30: Counter settings

No.	SHOW	RANGE	Initial value	Description and remarks
30001	Calculator selection	0-2	1	0: No Counter 1: Up counter 2: Down counter
30002	Calculation of trimmer times	0-50	1	Choose 1,Cut It once and counter one Choose 2,Cut It twice and counter one
30003	Counter present value, set value	0-9999	0/0	Present value is the current actual value,Set value is
30004	Bobbin winder present value			No Function
30005	Bobbin winder function switch			No Function

2. 31: Pattern sewing set

2. 31-1: 花样缝1设置

pattern segments	numbers of stitch	repetition times	stitch length
1	1	5	4. 8
2	1	1	2. 0
3-10	0	1	0

-16-

2. 31-2: 花样缝2设置

pattern segments	numbers of stitch	repetition times	stitch length
1	1	5	4. 0
2	4	1	2. 0
3-10	0	1	0

2. 31-4: 花样缝4设置

pattern segments	numbers of stitch	repetition times	stitch length
1	1	5	2. 0
2	1	1	5. 0
3-10	0	1	0

2. 31-3: 花样缝3设置

pattern segments	numbers of stitch	repetition times	stitch length
1	1	5	3. 5
2	4	1	1. 5
3-10	0	1	0

2. 31-4: 花样缝4设置

pattern segments	numbers of stitch	repetition times	stitch length
1	1	1	5. 0
2	1	1	4. 0
3	1	1	3. 0
4	1	1	2. 0

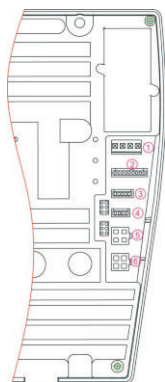
3. Error Code List

Error Code	Problem Description	Measure
E01	Over-voltage	Turn off the machine, check the power supply voltage. (Or whether exceed the rated voltage of use). If there are still errors, please replace the control box and call for customer service.
E02	Low-voltage	Turn off the machine, check the power supply voltage. (Or whether under the rated voltage of use). If there are still errors, please replace the control box and call for customer service.
E03	CPU communication error	Turn off the machine, please check if the operation panel in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.
E05	Pedal connection error	Turn the machine handwheel, check if it is stuck. If it is stuck, you have to rule out the mechanical failure. If turn normal, check if the encoder and motor in bad connection or is too loose. If yes, please correct. If connection well, check if the power supply voltage is abnormal or sewing speed is too high. If yes, please adjust. If there are still errors, please replace the control box and call for customer service.
E07	Motor locked-rotor error	Turn the machine handwheel, check if it is stuck. If it is stuck, you have to rule out the mechanical failure. If turn normal, check if the encoder and motor in bad connection or is too loose. If yes, please correct. If connection well, check if the power supply voltage is abnormal or sewing speed is too high. If yes, please adjust. If there are still errors, please replace the control box and call for customer service.
E08-0	Communication abnormal	
E08-2	Back-tacking step motor over current	Turn off the machine, check if motor is stuck. If it is stuck, you have to rule out the mechanical failure. If turn normal, please check if the motor in bad connection or is too loose.
E08-4	Back-tacking step start can't find original point.	To get it right and turn on. If there are still errors, please replace the control box and call for customer service.
E08-16	Trimming step motor over current	
E08-32	Trimming step motor can't find original point	

-17-

E09 E11	Positioning signal error	Turn off the machine, please check if the encoder in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.
E10	Solenoid over-current	Turn off the machine, please check the related circuit is shorted or damaged.
E14	Encoder error	Turn off the machine, please check if the encoder in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.
E15	Power supply module abnormal over-current	Turn off the machine, then turn on again. If there are still errors, please replace the control box and call for customer service.
E17	Machine protection switch is not in the correct position	Turn off the machine, then turn on again. If there are still errors, please replace the control box and call for customer service.
E20	Motor failed to start (Electrical angle error)	Turn off the machine, please check if the encoder and motor in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.

3. Port Diagram



- ① Spindle motor power cord connector
- ② Spindle motor encoder wire interface
- ③ Backstitch line stepper motor encoder interfaces
- ④ Cut wire stepper motor encoder interfaces
- ⑤ Backstitch stepper motor power cord connector
- ⑥ Trimming stepper motor power cord connector

-18-